

CLAIMS

1. An alternating current (AC) generator comprising:
 a casing defining an accommodation space therein;
 a stator assembly supported in said accommodation space in
 said casing;
 5 said stator assembly including stator slots/teeth and a 5-phase
 winding distributed through and among said stator teeth;
 a rotor assembly including a plurality of pairs of opposed pole
 members rotatably disposed inside said stator assembly;
 said pairs of pole members configured for energization in
 10 opposite magnetic polarity; and
 a plurality of rectifiers to rectify output voltages generated by
 the 5-phase winding.

2. The AC generator of claim 1 wherein the number of stator
 slots, S_1 , is represented by $S_1 = 10n p$ where n is any integer and p is the
 number of rotor pole pairs.

3. The AC generator of claim 1 wherein said stator slots
 number 10 times the number of pole pairs.

4. The AC generator of claim 2 wherein said stator slots
 number 60.

5. The AC generator of claim 4 wherein a majority of the
 phase winding is wound around five stator teeth then advanced five stator teeth

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and again wound around five stator teeth and repeated until all the stator teeth are wound.

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6. The AC generator of claim 4 wherein each phase winding is woven through a slot, turned out and run along said five stator teeth, woven through an adjacent slot, turned out and run along side five stator teeth, and repeated to configure a wave wind until all the stator teeth are included.

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7. The AC generator of claim 4 wherein each phase winding of the five, 5-phase windings is offset two stator teeth from the adjacent phase winding.

8. The AC generator of claim 1 including a diode pair to capture zero sequence current.

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